

DERWENT-ACC-NO: 1990-034505

DERWENT-WEEK: 199005

COPYRIGHT 1999 DERWENT INFORMATION LTD

TITLE: Conductive paste - comprises  
inorganic particles and  
conducting particles dispersed in  
vehicle where inorganic  
particles have surface acting to  
metallic ions

PATENT-ASSIGNEE: TAIYO YUDEN KK [TAIO]

PRIORITY-DATA: 1988JP-0145018 (June 13, 1988)

PATENT-FAMILY:

PUB-NO	PUB-DATE	
LANGUAGE	PAGES	MAIN-IPC
JP 01313804 A	005	December 19, 1989
	N/A	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP 01313804A	N/A	
1988JP-0145018	June 13, 1988	

INT-CL (IPC): C04B041/88, C23C018/36, C23C024/08,  
H01B001/22

ABSTRACTED-PUB-NO: JP 01313804A

BASIC-ABSTRACT:

Conductive paste of conductive particles and inorganic particles are dispersed in a vehicle, where the inorganic particles comprise particles having an active surface to the metallic ions of a non-electrolytic plating bath.

Typically alumina particles (1.0 micron ave dia.) are dipped in a first

activation soln. (1000 ml water, 2 g SnCl<sub>2</sub> 4 ml HCl) and second activation soln. in order to form inorganic particles of which the surface is activated to metallic ions of the non-electrolytic plating bath. A conductive paste is prep'd. by mixing 100 pts.wt. Ni particles (3 microns ave particle dia.), 10 pts.wt. Al<sub>2</sub>O<sub>3</sub> particles, 16 pts.wt. ethyl cellulose, and 4 pts.wt. butyl carbitol for 4 hrs., mulling for 1 hr.. An outside electrode is formed by coating the paste on both terminals of a ceramic capacitor chip at 50 microns thickness forming a Ni plated film on it, a 3 micron thick soldering film, and then 500 of the chips are soldered on a print circuit substrate and then tensile load is applied. No exfoliation is found below 5 kg of tensile load.

ADVANTAGE - The paste controls shrinkage of the paste and substrate. Bonding between the paste and the substrate is good, so that solderability is improved.

TITLE-TERMS: CONDUCTING PASTE COMPRISE INORGANIC PARTICLE CONDUCTING PARTICLE  
DISPERSE VEHICLE INORGANIC PARTICLE SURFACE ACT  
METALLIC ION

ADDL-INDEXING-TERMS:  
CAPACITOR ELECTRODE

DERWENT-CLASS: L03 M13 V01 V02 X11 X12

CPI-CODES: L03-A01A3; M13-B;

EPI-CODES: V01-B03D; X12-D01X;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1544U; 1701U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1990-015287

Non-CPI Secondary Accession Numbers: N1990-026335